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Arms sales and child health

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Arms Sales and Child Health

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Abstract

The adverse effects of armed conflict on child health are well recognised. The relationships between the arms trade, armed conflict and child health are less clearly defined. The arms trade is one of the largest industries in the world (total expenditure US\$1,917 billion in 2019), generating colossal profits to private companies and individuals at the expense of taxpayers throughout the world. The money wasted on weapons designed to kill and maim should be used for more socially useful products, such as clean water, food, health and education. The Sustainable Development Goals can be funded by diverting money from the arms companies. Health professionals and their organisations have a responsibility to children to try and curb the ever expanding arms industry.

Keywords: arms trade; armed conflict; child health

Key messages

- Armed conflict and arms sales adversely affect child health
- Military expenditure is colossal, US\$1,917 billion in 2019
- The Sustainable Development Goals could be funded by diverting military expenditure
- Arms sales are open to corruption, due to the secrecy involved in many deals

Armed conflict and child health

The devastating impact of armed conflict on child health is well recognised [1-4]. It is estimated that one in nine children worldwide lives in an area of armed conflict [2]. Children may experience physical injury or death directly from trauma but also may experience problems with malnutrition or sepsis as a secondary effect of armed conflict. A wide array of mental health trauma is also associated with conflict. Some of the devastating impacts are illustrated in Table 1 [5-16]. The table is not a comprehensive review of the effects of armed conflict, as recent systematic reviews have documented this [1,4].

Even after the armed conflict has ceased in a given area, children may experience significant health problems. These may be associated with a loss of health and educational facilities or shortages of food and/or water [12-16].

The global trade in weapons exacerbates this situation. Landmines and cluster munitions are a particular problem in certain regions, causing untold immediate and long-term suffering [6]. An additional problem is the widespread availability of firearms of a variety of types [17].

Table 1: Effects of armed conflict on child health

Direct	Comments	Reference
Death	Increased mortality rates (infants)	[5]Curlin et al 1976
Blast injuries	Increased morbidity and mortality (young children)	[6]Milwood Hargrave et al 2019
Disability	Amputations	[7]Bertani et al 2015
Burns	Increased mortality rates	[8]Borgman et al 2015
Sexual violence	More likely in children under 18 years	[9]Nelson et al 2011
Torture	Physical and mental	[10]Rashid et al 2012
Mental health	Numerous problems	[1] Slone& Mann 2016
Sleep disturbance	Nightmares, delayed sleep onset	[11]Montgomery 2001

Indirect	Comments	Reference
Malnutrition	Increased rates	[12]Cliff et al 1997
Infections	Increased rates	[13]Chironna et al 2003
Parental separation	Numerous problems	[14]Pesonen et al 2008
Abuse	Increased by injured parents	[15]Hisle-Gorman et al 2015
Lack of access to education	Numerous problems	[16]Mann 2010

Military Expenditure and Child Health

The sums spent on military expenditure are colossal and are beyond the comprehension of most people. In 2019, world military expenditure was estimated to have been US\$1,917 billion by the Stockholm International Peace Research Institute [18]. That is \$250 for every person on the planet.

The USA accounted for more than one third of global military expenditure (US\$732 billion). The US does not have universal health care for children or pregnant women. It also has higher child mortality rates than neighbouring Canada and Cuba [19].

China, Saudi Arabia, India and France were the other largest contributors to military spending. In Saudi Arabia military expenditure reached 8.0% of GDP in 2019 [20]. India spent US\$71.1 billion and was the third highest spender on the military in 2019 [20]. India increased its military expenditure by 6.8% in 2019 [20]. India spends more on the military than on health (US\$21.2billion) despite having a high child mortality rate alongside high levels of child malnutrition. Data from UNICEF for 2018 shows that the under 5 child mortality rate for India was 37 [19]. This is higher than neighbouring Bangladesh (30) and Nepal (32), both of which are considerably poorer than India [19]. Over a third of children under the age of 5 years in India have malnutrition [19].

The Sustainable Development Goals (SDGs) have been agreed as important by the international community. Governments, however, often state that the SDGs are aspirational and that they cannot afford them. The cost of SDG 3 which relates to health and wellbeing and SDG 6 which relates to clean water and sanitation are however significantly less than the military spending of one country alone – the USA! (Table 2) [21,22].

Table 2 Military expenditure and cost of achieving SDGs

Expenditure	US billion \$	Reference
Military expenditure global 2019	1917	SIPRI [20]
Military expenditure USA 2019	732	SIPRI [20]
Achieving SDG 3 health	274	Stenberg et al 2017 [21]
Achieving SDG 6 water and sanitation	114	Hutton & Varughese [22]

Political Priorities – Child Health or Military Expenditure?

Most people, and parents in particular, would prioritise spending on healthcare rather than spending on weapons, whether it be weapons of mass destruction such as nuclear weapons or conventional weapons. The arms trade, both nuclear and conventional, detrimentally impacts child health in three primary inter-related ways: the diversion of resources towards military spending and away from child health spending both directly and indirectly (on poverty alleviation, nutrition, shelter, education, etc.);

the resources wasted by the pervasive corruption in the arms trade, as well as the corroding of the rule of law and democracy that follows; and the life-threatening and humanitarian crises engendered by conflict.

The costs of nuclear weapons are astronomical. Britain is in the process of upgrading its nuclear arsenal at a cost of over £200bn, but was unable to provide basic protective equipment to frontline health staff for the first two months of the COVID-19 pandemic. Nuclear weapons cannot be used without causing indiscriminate loss of civilian life which is recognised to be against Geneva Conventions and therefore to constitute a war crime. The United Nations passed the Treaty on the Prohibition of Nuclear Weapons in July 2017 [23]. Unfortunately, the nuclear powers and the North Atlantic Treaty Organisation (NATO) have all resisted the implementation of the Treaty. Biological and chemical weapons have previously been outlawed and it will hopefully only be a matter of time before nuclear weapons are outlawed too.

Why do we buy and sell so many weapons to kill? Arms trade and corruption

The profits involved in selling arms are huge and as a consequence, the trade in weapons is thought to account for 40% of all corruption in global trade [24]. The defence companies, the state in its broadest form, assorted, often dubious intermediaries and, crucially, individual politicians and political parties, negotiate multi-billion dollar arms deals, conducted behind a veil of national security imposed secrecy [25,26]. Such a system encourages corruption.

This system was explicitly revealed in the world’s most corrupt commercial transaction, an arms deal between Britain and Saudi Arabia known as the Al Yamamah deal [27]. It is alleged that £6bn of commissions (bribes) were paid to members of the Saudi royal family, and individuals in the UK through a number of intermediaries [27].

The close and opaque relationships between the weapons makers, governments, political parties and individual politicians means that the trade operates with virtual legal impunity. The Serious Fraud Office abruptly discontinued its inquiry in December 2006 citing the need to safeguard national and international security [28]. The Prime Minister at the time, Tony Blair supported this decision. In 2010, BAE Systems, the arms company involved in the Al Yamamah deal pleaded guilty in the USA of conspiring to making false statements in relation to the Al Yamamah agreement and contracts with the Hungarian and Czech governments [28]. BAE was given a 400 million dollar fine by the US Dept of Justice [28]. In 2011, BAE agreed to pay the US State Dept up to 79 million dollars for violating military export rules [29]

A key consequence of the corrupt, secretive financial flows in arms sales is that governments, arms manufacturers and the military will go to great lengths to ensure there is a regular flow of large arms deals. This requires them to overstate the national security threats faced by their countries, which has the consequence of de-emphasising a number of very real, non-military threats, including health pandemics, climate change, poverty and inequality. When the so-called ‘War on Terror’ was initiated the major arms companies re-purposed all of their existing weapons systems for this new threat, resulting in a wave of arms deals for equipment manufactured for non-terrorism threats. Multi-billion dollar deals for inappropriate or unnecessary equipment are common-place in the global arms trade. This is exemplified by the F-35 jet (estimated cost \$80 million per plane!), which has had numerous technical problems, despite the arms manufacturer Lockheed Martin receiving a \$6 billion advance payment.[30,31]

The detrimental socio-economic and health sequelae of the arms trade are starkly illustrated by an arms deal undertaken by the newly-democratic government of South Africa in the late 1990s. A mere

four years after the end of apartheid, the government spent \$5 billion on weapons on new fighter jets, helicopters, submarines and warships that it did not need[31]. To date, two politicians/business men have been found guilty of accepting bribes and ex-president Zuma has been charged with corruption [32,33]. For the cost of the weapons the government could have provided anti-retroviral medication to the six million South Africans living with HIV or AIDS.

Yemen

The conflict in Yemen is arguably the most horrific manifestation of the human consequences of the trade in weapons. The United Nations verified 11,799 grave violations against children in Yemen between April 2013 and December 2018 [34]. The report highlights the brutal violence suffered by children. Killing and maiming has occurred in homes, schools, hospitals and playgrounds. Almost half the violations occurred during air strikes. UNICEF describes Yemen as the largest humanitarian crisis in the world, suggesting that more than 24 million people, including more than 12 million children, are in need of humanitarian assistance [35].

Despite the catastrophic human situation, the UK is thought to have sold over 5 billion pounds of weapons to Saudi Arabia since 2015 [36]. Arms sales to Saudi Arabia were declared illegal by the court of appeal in June 2019[36]. The court felt that government ministers had illegally signed off on arms exports without properly assessing the risk to civilians [37]. Despite the judgement by the court of appeal, sales to Saudi Arabia appear to have continued [38]. As at mid-July 2020 the British government has announced the full resumption of arms sales to Saudi Arabia, claiming that it has addressed the concerns of the court.

Small Arms

It is estimated that there are more than one billion firearms worldwide which are responsible for over half a million deaths a year [5]. The vast majority of these are owned by civilians [5]. In the USA, firearm related deaths are greater than those due to road traffic collisions [39]. Following armed conflict, small firearms usually remain with communities. Their widespread availability, especially in regions affected by conflict, means it is easy for informal militias and criminal gangs to obtain small firearms. This increases their adverse effect on communities trying to recover from violent conflicts. Despite the huge number of guns in circulation, arms manufacturers are keen to maximise profits by continuing to promote sales. It is estimated that over half a million military small arms are produced each year [5].

Politicians in the US have largely supported the country's inexplicably lax gun controls, despite continuous, tragic gun-related killings in the country. Weak, often non-existent, arms export controls result in small and light weapons being available wherever there is conflict in the world.

Priorities and Political Will

The adverse effects of the arms trade on health were highlighted 25 years ago in the BMJ [40]. Several years later in the same journal the adverse effects of the arms trade on child and maternal health were documented [41]. In the last 25 years, the UK has spent over 40 billion US dollars each year on military expenditure and it has increased from 42 billion US dollars to almost 50 billion US dollars [18]. This is a staggering 1125 billion US dollars over the 25 years. Despite this expenditure, successive governments have cut back on libraries, social care, playing facilities and other public services stating that they do not have sufficient money.

The secretive trade in weapons is under-regulated, corrupt and operates largely above the law. This has created a reality in which our political leaders favour conflict over diplomacy, and profits over

people. National security threats are blown out of all proportion, while climate change, health risks and other very real threats to human security, are deemed secondary and consequently underfunded. The impact on child health is devastating.

Individuals cannot compete against the lobbying of the major arms manufacturers or NATO which calls for military expenditure of 2% GDP for each member state [42]. It is therefore essential that professional organisations of health professionals raise the issue of the need to reduce military expenditure and the production of weapons, whether it be firearms, cluster bombs, land mines or nuclear weapons (Box 1). Physicians in the USA, where there is an epidemic of firearm related injuries, have raised the importance of recognising firearm injury as a public health issue. The World Health Organisation has reported on the need to both reduce violence and to reduce the global arms trade [43].

The United Nations has shown the way forward with its Treaty on the Prohibition of Nuclear Weapons. Additionally, the call for a global ceasefire by the UN Secretary General is to be both welcomed and supported [44]. Organisations such as Medact have demonstrated that health professionals can play a key role in promoting both peace and social justice [45]. We suggest that professional organisations of health professionals working with children call for the recognition that the arms trade is detrimental to child health and support actions to reduce arms sales (Box 1).

Box 1 Actions needed to reduce arms trade and improve child health

Signing and ratification of the UN Treaty on the Prohibition of Nuclear Weapons
Support the call for a global ceasefire by the UN Secretary General
Immediate global reductions of military expenditure by 50% with the money being invested in health and education.
Recognition that the arms trade has an adverse health effect on children
Diversification of the arms industry into renewable energy to minimise the climate emergency

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Armed conflict and child health

The devastating impact of armed conflict on child health is well recognised [1-4]. It is estimated that one in nine children worldwide lives in an area of armed conflict [2]. Children may experience physical injury or death directly from trauma but also may experience problems with malnutrition or sepsis as a secondary effect of armed conflict. A wide array of mental health trauma is also associated with conflict. Some of the devastating impacts are illustrated in Table 1 [5-16]. The table is not a comprehensive review of the effects of armed conflict, as recent systematic reviews have documented this [1,4]. It simply illustrates the devastating effect of armed conflict on child health.

Even after the armed conflict has ceased in a given area, children may experience significant health problems. These may be associated with a loss of health and educational facilities or shortages of food and/or water [12-16].

The global trade in weapons exacerbates this situation. Landmines and cluster munitions are a particular problem in certain regions, causing untold immediate and long-term suffering [6]. An additional problem is the widespread availability of firearms of a variety of types [17]. The aim of this narrative review is to explore the effects of the arms trade on child health. It is not a systematic review, but rather a narrative review of the arms trade.

Table 1: Effects of armed conflict on child health

Direct	Comments	Reference
Death	Increased mortality rates (infants)	[5]Curlin et al 1976
Blast injuries	Increased morbidity and mortality (young children)	[6]Milwood Hargrave et al 2019
Disability	Amputations	[7]Bertani et al 2015
Burns	Increased mortality rates	[8]Borgman et al 2015
Sexual violence	More likely in children under 18 years	[9]Nelson et al 2011
Torture	Physical and mental	[10]Rashid et al 2012

Mental health	Post traumatic stress disorder, behavioural and emotional problems, sleep problems, disturbed play, and psychosomatic symptoms	[1] Slone& Mann 2016
Sleep disturbance	Nightmares, delayed sleep onset	[11]Montgomery 2001
Indirect	Comments	Reference
Malnutrition	Increased rates	[12]Cliff et al 1997
Infections	Increased rates	[13]Chironna et al 2003
Parental separation	Malnutrition, increased rates of abuse, earlier menarche	[14]Pesonen et al 2008
Abuse	Increased by injured parents	[15]Hisle-Gorman et al 2015
Lack of access to education	Self-esteem problems, worries regarding employment, illiteracy	[16]Mann 2010

Military Expenditure and Child Health

The sums spent on military expenditure are colossal and are beyond the comprehension of most people. In 2019, world military expenditure was estimated to have been US\$1,917 billion by the Stockholm International Peace Research Institute [18]. That is \$250 for every person on the planet.

The USA accounted for more than one third of global military expenditure (US\$732 billion). The US does not have universal health care for children or pregnant women. It also has higher child mortality rates than neighbouring Canada and Cuba [19].

China, Saudi Arabia, India and France were the other largest contributors to military spending. In Saudi Arabia military expenditure reached 8.0% of GDP in 2019 [20]. India spent US\$71.1 billion and was the third highest spender on the military in 2019 [20]. India increased its military expenditure by 6.8% in 2019 [20]. India spends more on the military than on health (US\$21.2billion) despite having a high child mortality rate alongside high levels of child malnutrition. Data from UNICEF for 2018 shows that the under 5 child mortality rate for India was 37 [19]. This is higher than neighbouring Bangladesh (30) and Nepal (32), both of which are considerably poorer than India [19]. Over a third of children under the age of 5 years in India have malnutrition [19].

The Sustainable Development Goals (SDGs) have been agreed as important by the international community. Governments, however, often state that the SDGs are aspirational and that they cannot afford them. The cost of SDG 3 which relates to health and wellbeing and SDG 6 which relates to clean water and sanitation are however significantly less than the military spending of one country alone – the USA! (Table 2) [21,22].

Table 2 Military expenditure and cost of achieving SDGs

Expenditure	US billion \$	Reference
Military expenditure global 2019	1917	SIPRI [20]
Military expenditure USA 2019	732	SIPRI [20]
Achieving SDG 3 health	274	Stenberg et al 2017 [21]
Achieving SDG 6 water and sanitation	114	Hutton & Varughese [22]

Political Priorities – Child Health or Military Expenditure?

Most people, and parents in particular, would prioritise spending on healthcare rather than spending on weapons, whether it be weapons of mass destruction such as nuclear weapons or conventional weapons. The arms trade, both nuclear and conventional, detrimentally impacts child health in three primary inter-related ways: the diversion of resources towards military spending and away from child health spending both directly and indirectly (on poverty alleviation, nutrition, shelter, education, etc.); the resources wasted by the pervasive corruption in the arms trade, as well as the corroding of the rule of law and democracy that follows; and the life-threatening and humanitarian crises engendered by conflict. It has been estimated that the cost of funding the SDGs is \$195 per person, which is less than that of the annual military expenditure of \$250 per person [23]. The importance of prioritising child health has been emphasised by both WHO and UNICEF [23]

The costs of nuclear weapons are astronomical. Britain is in the process of upgrading its nuclear arsenal at a cost of over £200bn, but was unable to provide basic protective equipment to frontline health staff for the first two months of the COVID-19 pandemic. Nuclear weapons cannot be used without causing indiscriminate loss of civilian life which is recognised to be against Geneva Conventions and therefore to constitute a war crime. The increase in nuclear weapons by India and Pakistan is of major concern [24]. A nuclear attack by either country could result in the death of millions of people, and also changes to the atmosphere, crop failures and a worldwide famine [24]. The United Nations passed the Treaty on the Prohibition of Nuclear Weapons in July 2017 [25]. Unfortunately, the nuclear powers and the North Atlantic Treaty Organisation (NATO) have all resisted the implementation of the Treaty. Biological and chemical weapons have previously been outlawed and it will hopefully only be a matter of time before nuclear weapons are outlawed too.

Why do we buy and sell so many weapons to kill? Arms trade and corruption

The profits involved in selling arms are huge and as a consequence, the trade in weapons is thought to account for 40% of all corruption in global trade [26]. The defence companies, the state in its broadest form, assorted, often dubious intermediaries and, crucially, individual politicians and political parties, negotiate multi-billion dollar arms deals, conducted behind a veil of national security imposed secrecy [27,28]. Such a system encourages corruption.

This system was explicitly revealed in the world’s most corrupt commercial transaction, an arms deal between Britain and Saudi Arabia known as the Al Yamamah deal [29]. It is alleged that £6bn of commissions (bribes) were paid to members of the Saudi royal family, and individuals in the UK through a number of intermediaries [29].

The close and opaque relationships between the weapons makers, governments, political parties and individual politicians means that the trade operates with virtual legal impunity. The Serious Fraud Office abruptly discontinued its inquiry in December 2006 citing the need to safeguard national and international security [30]. The Prime Minister at the time, Tony Blair supported this decision. In 2010, BAE Systems, the arms company involved in the Al Yamamah deal pleaded guilty in the USA of conspiring to making false statements in relation to the Al Yamamah agreement and contracts with the Hungarian and Czech governments [30]. BAE was given a 400 million dollar fine by the US Dept of Justice [30]. In 2011, BAE agreed to pay the US State Dept up to 79 million dollars for violating military export rules [31]

A key consequence of the corrupt, secretive financial flows in arms sales is that governments, arms manufacturers and the military will go to great lengths to ensure there is a regular flow of large arms deals. This requires them to overstate the national security threats faced by their countries, which has

the consequence of de-emphasising a number of very real, non-military threats, including health pandemics, climate change, poverty and inequality. When the so-called 'War on Terror' was initiated the major arms companies re-purposed all of their existing weapons systems for this new threat, resulting in a wave of arms deals for equipment manufactured for non-terrorism threats. Multi-billion dollar deals for inappropriate or unnecessary equipment are common-place in the global arms trade. This is exemplified by the F-35 jet (estimated cost \$80 million per plane!), which has had numerous technical problems, despite the arms manufacturer Lockheed Martin receiving a \$6 billion advance payment.[32,33]

The detrimental socio-economic and health sequelae of the arms trade are starkly illustrated by an arms deal undertaken by the newly-democratic government of South Africa in the late 1990s. A mere four years after the end of apartheid, the government spent \$5 billion on weapons on new fighter jets, helicopters, submarines and warships that it did not need[34]. To date, two politicians/business men have been found guilty of accepting bribes and ex-president Zuma has been charged with corruption [34,35]. For the cost of the weapons the government could have provided anti-retroviral medication to the six million South Africans living with HIV or AIDS.

Yemen

The conflict in Yemen is arguably the most horrific manifestation of the human consequences of the trade in weapons. The United Nations verified 11,799 grave violations against children in Yemen between April 2013 and December 2018 [36]. The report highlights the brutal violence suffered by children. Killing and maiming has occurred in homes, schools, hospitals and playgrounds. Almost half the violations occurred during air strikes. UNICEF describes Yemen as the largest humanitarian crisis in the world, suggesting that more than 24 million people, including more than 12 million children, are in need of humanitarian assistance [37].

Despite the catastrophic human situation, the UK is thought to have sold over 5 billion pounds of weapons to Saudi Arabia since 2015 [38]. Arms sales to Saudi Arabia were declared illegal by the court of appeal in June 2019[36]. The court felt that government ministers had illegally signed off on arms exports without properly assessing the risk to civilians [39]. Despite the judgement by the court of appeal, sales to Saudi Arabia appear to have continued [40]. As at mid-July 2020 the British government has announced the full resumption of arms sales to Saudi Arabia, claiming that it has addressed the concerns of the court.

Small Arms

It is estimated that there are more than one billion firearms worldwide which are responsible for over half a million deaths a year [5]. The vast majority of these are owned by civilians [5]. In the USA, firearm related deaths are greater than those due to road traffic collisions [41]. Following armed conflict, small firearms usually remain with communities. Their widespread availability, especially in regions affected by conflict, means it is easy for informal militias and criminal gangs to obtain small firearms. This increases their adverse effect on communities trying to recover from violent conflicts. The longevity of weapons is illustrated by the Mannlicher M-95, a rifle produced for the Austro-Hungarian Army in World War 1. It is thought to have been used in conflicts in Africa fifty years later! [42]. Despite the huge number of guns in circulation, arms manufacturers are keen to maximise profits by continuing to promote sales. It is estimated that over half a million military small arms are produced each year [5].

Politicians in the US have largely supported the country's inexplicably lax gun controls, despite continuous, tragic gun-related killings in the country. Weak, often non-existent, arms export controls result in small and light weapons being available wherever there is conflict in the world. It is estimated that there are over 100 million AK-47 assault rifles worldwide.

Priorities and Political Will

The adverse effects of the arms trade on health were highlighted 25 years ago in the BMJ [43]. Several years later in the same journal the adverse effects of the arms trade on child and maternal health were documented [44]. In the last 25 years, the UK has spent over 40 billion US dollars each year on military expenditure and it has increased from 42 billion US dollars to almost 50 billion US dollars [18]. This is a staggering 1125 billion US dollars over the 25 years. Despite this expenditure, successive governments have cut back on libraries, social care, playing facilities and other public services stating that they do not have sufficient money.

Politicians argue that military expenditure is essential to maintain employment. However, it has been documented that the number of people involved in producing weapons is less than 0.7% of the total UK workforce [45]. Many if not all the engineers involved in producing weapons could be re-employed in the renewable energy industry, which would also help to combat the climate emergency [46]

The secretive trade in weapons is under-regulated, corrupt and operates largely above the law. This has created a reality in which our political leaders favour conflict over diplomacy, and profits over people. National security threats are blown out of all proportion, while climate change, health risks and other very real threats to human security, are deemed secondary and consequently underfunded. The impact on child health is devastating.

Individuals cannot compete against the lobbying of the major arms manufacturers or NATO which calls for military expenditure of 2% GDP for each member state [47]. It is therefore essential that professional organisations of health professionals raise the issue of the need to reduce military expenditure and the production of weapons, whether it be firearms, cluster bombs, land mines or nuclear weapons (Box 1). Physicians in the USA, where there is an epidemic of firearm related injuries, have raised the importance of recognising firearm injury as a public health issue. The World Health Organisation has reported on the need to both reduce violence and to reduce the global arms trade [48].

The United Nations has shown the way forward with its Treaty on the Prohibition of Nuclear Weapons. Additionally, the call for a global ceasefire by the UN Secretary General is to be both welcomed and supported [49]. Organisations such as Medact and the International Society for Social Pediatrics and Child Health (ISSOP) have demonstrated that health professionals can play a key role in promoting both peace and social justice [450,51]. We suggest that professional organisations of health professionals working with children call for the recognition that the arms trade is detrimental to child health and support actions to reduce arms sales (Box 1).

Box 1 Actions needed to reduce arms trade and improve child health

Signing and ratification of the UN Treaty on the Prohibition of Nuclear Weapons
Support the call for a global ceasefire by the UN Secretary General
Immediate global reductions of military expenditure by 50% with the money being invested in health and education.
Recognition that the arms trade has an adverse health effect on children
Diversification of the arms industry into renewable energy to minimise the climate emergency

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Arms Sales and Child Health

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Abstract

The adverse effects of armed conflict on child health are well recognised. The relationships between the arms trade, armed conflict and child health are less clearly defined. The arms trade is one of the largest industries in the world (total expenditure US\$1,917 billion in 2019), generating colossal profits to private companies and individuals at the expense of taxpayers throughout the world. The money wasted on weapons designed to kill and maim should be used for more socially useful products, such as clean water, food, health and education. The Sustainable Development Goals can be funded by diverting money from the arms companies. Health professionals and their organisations have a responsibility to children to try and curb the ever expanding arms industry.

Keywords: arms trade; armed conflict; child health

Key messages

- Armed conflict and arms sales adversely affect child health
- Military expenditure is colossal, US\$1,917 billion in 2019
- The Sustainable Development Goals could be fully funded by diverting military expenditure
- Arms sales are open to corruption, due to the secrecy involved in many deals

Armed conflict and child health

The devastating impact of armed conflict on child health is well recognised [1-4]. It is estimated that one in nine children worldwide lives in an area of armed conflict [2]. Children may experience physical injury or death directly from trauma but also may experience problems with malnutrition or sepsis as a secondary effect of armed conflict. A wide array of mental health trauma is also associated with conflict. Some of the devastating impacts are illustrated in Table 1 [5-16]. The table is not a comprehensive review of the effects of armed conflict, as recent systematic reviews have documented this [1,4]. It simply illustrates the devastating effect of armed conflict on child health.

Even after the armed conflict has ceased in a given area, children may experience significant health problems. These may be associated with a loss of health and educational facilities or shortages of food and/or water [12-16].

The global trade in weapons exacerbates this situation. Landmines and cluster munitions are a particular problem in certain regions, causing untold immediate and long-term suffering [6]. An additional problem is the widespread availability of firearms of a variety of types [17]. The aim of this narrative review is to explore the effects of the arms trade on child health. It is not a systematic review, but rather a narrative review of the arms trade.

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The sums spent on military expenditure are colossal and are beyond the comprehension of most people. In 2019, world military expenditure was estimated to have been US\$1,917 billion by the Stockholm International Peace Research Institute [18]. That is \$250 for every person on the planet.

The USA accounted for more than one third of global military expenditure (US\$732 billion). The US does not have universal health care for children or pregnant women. It also has higher child mortality rates than neighbouring Canada and Cuba [19].

China, Saudi Arabia, India and France were the other largest contributors to military spending. In Saudi Arabia military expenditure reached 8.0% of GDP in 2019 [20]. India spent US\$71.1 billion and was the third highest spender on the military in 2019 [20]. India increased its military expenditure by 6.8% in 2019 [20]. India spends more on the military than on health (US\$21.2billion) despite having a high child mortality rate alongside high levels of child malnutrition. Data from UNICEF for 2018 shows that the under 5 child mortality rate for India was 37 [19]. This is higher than neighbouring Bangladesh (30) and Nepal (32), both of which are considerably poorer than India [19]. Over a third of children under the age of 5 years in India have malnutrition [19].

The Sustainable Development Goals (SDGs) have been agreed as important by the international community. Governments, however, often state that the SDGs are aspirational and that they cannot afford them. The cost of SDG 3 which relates to health and wellbeing and SDG 6 which relates to clean water and sanitation are however significantly less than the military spending of one country alone – the USA! (Table 2) [21,22].

Table 2 Military expenditure and cost of achieving SDGs

Expenditure	US billion \$	Reference
Military expenditure global 2019	1917	SIPRI [20]
Military expenditure USA 2019	732	SIPRI [20]
Achieving SDG 3 health	274	Stenberg et al 2017 [21]
Achieving SDG 6 water and sanitation	114	Hutton & Varughese [22]

Political Priorities – Child Health or Military Expenditure?

Most people, and parents in particular, would prioritise spending on healthcare rather than spending on weapons, whether it be weapons of mass destruction such as nuclear weapons or conventional weapons. The arms trade, both nuclear and conventional, detrimentally impacts child health in three primary inter-related ways: the diversion of resources towards military spending and away from child health spending both directly and indirectly (on poverty alleviation, nutrition, shelter, education, etc.); the resources wasted by the pervasive corruption in the arms trade, as well as the corroding of the rule of law and democracy that follows; and the life-threatening and humanitarian crises engendered by conflict. It has been estimated that the cost of funding the SDGs is \$195 per person, which is less than that of the annual military expenditure of \$250 per person [23]. The importance of prioritising child health has been emphasised by both WHO and UNICEF [23]

The costs of nuclear weapons are astronomical. Britain is in the process of upgrading its nuclear arsenal at a cost of over £200bn, but was unable to provide basic protective equipment to frontline health staff for the first two months of the COVID-19 pandemic. Nuclear weapons cannot be used without causing indiscriminate loss of civilian life which is recognised to be against Geneva Conventions and therefore to constitute a war crime. The increase in nuclear weapons by India and Pakistan is of major concern [24]. A nuclear attack by either country could result in the death of millions of people, and also changes to the atmosphere, crop failures and a worldwide famine [24]. The United Nations passed the Treaty on the Prohibition of Nuclear Weapons in July 2017 [25]. Unfortunately, the nuclear powers and the North Atlantic Treaty Organisation (NATO) have all resisted the implementation of the Treaty. Biological and chemical weapons have previously been outlawed and it will hopefully only be a matter of time before nuclear weapons are outlawed too.

Why do we buy and sell so many weapons to kill? Arms trade and corruption

The profits involved in selling arms are huge and as a consequence, the trade in weapons is thought to account for 40% of all corruption in global trade [26]. The defence companies, the state in its broadest form, assorted, often dubious intermediaries and, crucially, individual politicians and political parties, negotiate multi-billion dollar arms deals, conducted behind a veil of national security imposed secrecy [27,28]. Such a system encourages corruption.

This system was explicitly revealed in the world’s most corrupt commercial transaction, an arms deal between Britain and Saudi Arabia known as the Al Yamamah deal [29]. It is alleged that £6bn of commissions (bribes) were paid to members of the Saudi royal family, and individuals in the UK through a number of intermediaries [29].

The close and opaque relationships between the weapons makers, governments, political parties and individual politicians means that the trade operates with inadequate legal scrutiny. The Serious Fraud Office abruptly discontinued its inquiry in December 2006 citing the need to safeguard national and international security [30]. The Prime Minister at the time, Tony Blair supported this decision. In 2010, BAE Systems, the arms company involved in the Al Yamamah deal pleaded guilty in the USA of conspiring to making false statements in relation to the Al Yamamah agreement and contracts with the Hungarian and Czech governments [30]. BAE was given a 400 million dollar fine by the US Dept of Justice [30]. In 2011, BAE agreed to pay the US State Dept up to 79 million dollars for violating military export rules [31]

A key consequence of the corrupt, secretive financial flows in arms sales is that governments, arms manufacturers and the military will go to great lengths to ensure there is a regular flow of large arms deals. This requires them to overstate the national security threats faced by their countries, which has

the consequence of de-emphasising a number of very real, non-military threats, including health pandemics, climate change, poverty and inequality. When the so-called 'War on Terror' was initiated the major arms companies re-purposed all of their existing weapons systems for this new threat, resulting in a wave of arms deals for equipment manufactured for non-terrorism threats. Multi-billion dollar deals for inappropriate or unnecessary equipment are common-place in the global arms trade. This is exemplified by the F-35 jet (estimated cost \$80 million per plane!), which has had numerous technical problems, despite the arms manufacturer Lockheed Martin receiving a \$6 billion advance payment.[32,33]

The detrimental socio-economic and health sequelae of the arms trade are starkly illustrated by an arms deal undertaken by the newly-democratic government of South Africa in the late 1990s. A mere four years after the end of apartheid, the government spent \$5 billion on weapons on new fighter jets, helicopters, submarines and warships that it did not need[34]. To date, two politicians/business men have been found guilty of accepting bribes and ex-president Zuma has been charged with corruption [34,35]. For the cost of the weapons the government could have provided anti-retroviral medication to the six million South Africans living with HIV or AIDS.

Yemen

The conflict in Yemen is arguably the most horrific manifestation of the human consequences of the trade in weapons. The United Nations verified 11,799 grave violations against children in Yemen between April 2013 and December 2018 [36]. The report highlights the brutal violence suffered by children. Killing and maiming has occurred in homes, schools, hospitals and playgrounds. Almost half the violations occurred during air strikes. UNICEF describes Yemen as the largest humanitarian crisis in the world, suggesting that more than 24 million people, including more than 12 million children, are in need of humanitarian assistance [37].

Despite the catastrophic human situation, the UK is thought to have sold over 5 billion pounds of weapons to Saudi Arabia since 2015 [38]. Arms sales to Saudi Arabia were declared illegal by the court of appeal in June 2019[36]. The court felt that government ministers had illegally signed off on arms exports without properly assessing the risk to civilians [39]. Despite the judgement by the court of appeal, sales to Saudi Arabia appear to have continued [40]. As at mid-July 2020 the British government has announced the full resumption of arms sales to Saudi Arabia, claiming that it has addressed the concerns of the court.

Small Arms

It is estimated that there are more than one billion firearms worldwide which are responsible for over half a million deaths a year [5]. The vast majority of these are owned by civilians [5]. In the USA, firearm related deaths are greater than those due to road traffic collisions [41]. Following armed conflict, small firearms usually remain with communities. Their widespread availability, especially in regions affected by conflict, means it is easy for informal militias and criminal gangs to obtain small firearms. This increases their adverse effect on communities trying to recover from violent conflicts. The longevity of weapons is illustrated by the Mannlicher M-95, a rifle produced for the Austro-Hungarian Army in World War 1. It is thought to have been used in conflicts in Africa fifty years later! [42]. Despite the huge number of guns in circulation, arms manufacturers are keen to maximise profits by continuing to promote sales. It is estimated that over half a million military small arms are produced each year [5].

Politicians in the US have largely supported the country's inexplicably lax gun controls, despite continuous, tragic gun-related killings in the country. Weak, often non-existent, arms export controls result in small and light weapons being available wherever there is conflict in the world. It is estimated that there are over 100 million AK-47 assault rifles worldwide.

Priorities and Political Will

The adverse effects of the arms trade on health were highlighted 25 years ago in the BMJ [43]. Several years later in the same journal the adverse effects of the arms trade on child and maternal health were documented [44]. In the last 25 years, the UK has spent over 40 billion US dollars each year on military expenditure and it has increased from 42 billion US dollars to almost 50 billion US dollars [18]. This is a staggering 1125 billion US dollars over the 25 years. Despite this expenditure, successive governments have cut back on libraries, social care, playing facilities and other public services stating that they do not have sufficient money.

Politicians argue that military expenditure is essential to maintain employment. However, it has been documented that the number of people involved in producing weapons is less than 0.7% of the total UK workforce [45]. Many if not all the engineers involved in producing weapons could be re-employed in the renewable energy industry, which would also help to combat the climate emergency [46]

The secretive trade in weapons is under-regulated, corrupt and operates largely above the law. This has created a reality in which our political leaders favour conflict over diplomacy, and profits over people. National security threats are blown out of all proportion, while climate change, health risks and other very real threats to human security, are deemed secondary and consequently underfunded. The impact on child health is devastating.

Individuals cannot compete against the lobbying of the major arms manufacturers or NATO which calls for military expenditure of 2% GDP for each member state [47]. It is therefore essential that professional organisations of health professionals raise the issue of the need to reduce military expenditure and the production of weapons, whether it be firearms, cluster bombs, land mines or nuclear weapons (Box 1). Physicians in the USA, where there is an epidemic of firearm related injuries, have raised the importance of recognising firearm injury as a public health issue. The World Health Organisation has reported on the need to both reduce violence and to reduce the global arms trade [48].

The United Nations has shown the way forward with its Treaty on the Prohibition of Nuclear Weapons. Additionally, the call for a global ceasefire by the UN Secretary General is to be both welcomed and supported [49]. Organisations such as Medact and the International Society for Social Pediatrics and Child Health (ISSOP) have demonstrated that health professionals can play a key role in promoting both peace and social justice [450,51]. We suggest that professional organisations of health professionals working with children call for the recognition that the arms trade is detrimental to child health and support actions to reduce arms sales (Box 1).

Box 1 Actions needed to reduce arms trade and improve child health

Signing and ratification of the UN Treaty on the Prohibition of Nuclear Weapons
Support the call for a global ceasefire by the UN Secretary General
Immediate global reductions of military expenditure by 50% with the money being invested in health and education.
Recognition that the arms trade has an adverse health effect on children
Diversification of the arms industry into renewable energy to minimise the climate emergency

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